

1. In a computing system that includes one or more processors, persistent media configured to store information that persists through power loss of the computing system, and system memory that may be more directly accessed by the one or more processors, the computing system operable in both normal mode and recovery mode, a method for the computing system operating in recovery mode while ensuring reliable message processing for messages received during the recovery mode operations, the method comprising the following:

an act of receiving a message corresponding to a particular message transaction;

upon receiving the message, an act of determining from state information corresponding to the particular message transaction that an instance governing the particular message transaction is in recovery mode;

an act of determining that the received message is a normal message suitable for normal mode operations;

an act of placing the message into a persistent queue for later processing; and

an act of completing recovery mode operation.

2. A method in accordance with Claim 1, further comprising the following:

an act of loading the state information from persistent media into system memory in response to the act of receiving the message.

3. A method in accordance with Claim 1, further comprising the following:

an act of saving the state information into persistent media after the act of placing the message into the persistent queue.

4. A method in accordance with Claim 1, wherein the message is a first message, the method further comprising the following:

an act of receiving a second message corresponding to the particular message transaction;

upon receiving the second message, an act of determining from state information corresponding to the particular message transaction that the instance governing the state information is still in recovery mode;

an act of determining that the second message is a recovery message suitable for recovery mode operations; and

an act of processing the recovery message.

5. A method in accordance with Claim 4, further comprising the following:

an act of loading the state information from persistent media into system memory in response to the act of receiving the second message.

6. A method in accordance with Claim 4, further comprising the following:

an act of saving the state information into persistent media after the act of processing the recovery message.

7. A method in accordance with Claim 4, further comprising the following:

an act of determining that the processing of the recovery message completes recovery of the instance governing the particular message transaction.

8. A method in accordance with Claim 7, further comprising the following:

an act of setting the state information to reflect normal operation mode, wherein the act of saving the state information into persistent media after the act of processing the recovery message occurs after the act of setting the state information to reflect normal operation mode.

9. A method in accordance with Claim 8, further comprising the following:
an act of processing one or more normal messages in the queue in response to the act of determining that the processing of the recovery message completes recovery of the instance governing the particular message transaction.

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10. A computer program product for use in a computing system that includes one or more processors, persistent media configured to store information that persists through power loss of the computing system, and system memory that may be more directly accessed by the one or more processors, the computing system operable in both normal mode and recovery mode, the computer program product for implementing a method for the computing system operating in recovery mode while ensuring reliable message processing for messages received during the recovery mode operations, the computer program product comprising one or more computer-readable media having thereon computer-executable instructions that, when executed by the one or more processors, cause the computing system to perform the following:

an act of receiving a message corresponding to a particular message transaction; upon receiving the message, an act of determining from state information corresponding to the particular message transaction that an instance governing the particular message transaction is in recovery mode; an act of determining that the received message is a normal message suitable for normal mode operations; an act of placing the message into a persistent queue for later processing; and an act of completing recovery mode operation.

11. A computer program product in accordance with Claim 10, wherein the one or more computer-readable media comprise physical memory media.

12. A computer program product in accordance with Claim 11, wherein the physical memory media comprises persistent media.

13. A computer program product in accordance with Claim 11, wherein the physical memory media comprises system memory.

14. A computer program product in accordance with Claim 10, wherein the one or more computer-readable media further have thereon computer-executable instructions that, when executed by the one or more processors, cause the computing system to further perform the following:

an act of loading the state information from persistent media into system memory in response to the act of receiving the message.

15. A computer program product in accordance with Claim 10, wherein the one or more computer-readable media further have thereon computer-executable instructions that, when executed by the one or more processors, cause the computing system to further perform the following:

an act of saving the state information into persistent media after the act of placing the message into the persistent queue.

16. A computer program product in accordance with Claim 10, wherein the message is a first message, and the one or more computer-readable media further have thereon computer-executable instructions that, when executed by the one or more processors, cause the computing system to further perform the following:

an act of receiving a second message corresponding to the particular message transaction;

upon receiving the second message, an act of determining from state information corresponding to the particular message transaction that the instance governing the state information is still in recovery mode;

an act of determining that the second message is a recovery message suitable for recovery mode operations; and

an act of processing the recovery message.

17. A computer program product in accordance with Claim 16, wherein the one or more computer-readable media further have thereon computer-executable instructions that, when executed by the one or more processors, cause the computing system to further perform the following:

an act of loading the state information from persistent media into system memory in response to the act of receiving the second message.

18. A computer program product in accordance with Claim 16, wherein the one or more computer-readable media further have thereon computer-executable instructions that, when executed by the one or more processors, cause the computing system to further perform the following:

an act of saving the state information into persistent media after the act of processing the recovery message.

19. A computer program product in accordance with Claim 16, wherein the one or more computer-readable media further have thereon computer-executable instructions

that, when executed by the one or more processors, cause the computing system to further perform the following:

an act of determining that the processing of the recovery message completes recovery of the instance governing the particular message transaction.

20. A computer program product in accordance with Claim 19, wherein the one or more computer-readable media further have thereon computer-executable instructions that, when executed by the one or more processors, cause the computing system to further perform the following:

an act of setting the state information to reflect normal operation mode, wherein the act of saving the state information into persistent media after the act of processing the recovery message occurs after the act of setting the state information to reflect normal operation mode.

21. A computer program product in accordance with Claim 20, wherein the one or more computer-readable media further have thereon computer-executable instructions that, when executed by the one or more processors, cause the computing system to further perform the following:

an act of processing one or more normal messages in the queue in response to the act of determining that the processing of the recovery message completes recovery of the instance governing the particular message transaction.

22. In a computing system that includes one or more processors, persistent media configured to store information that persists through power loss of the computing system, and system memory that may be more directly accessed by the one or more processors, the computing system operable in both normal mode and recovery mode, a method for the computing system operating in recovery mode while ensuring reliable message processing for messages received during the recovery mode operations, the method comprising the following:

an act of receiving a message corresponding to a particular message transaction; upon receiving the message, an act of determining from state information corresponding to the particular message transaction that an instance governing the particular message transaction is in recovery mode; and

a step for recovering while preserving such messages.

23. A method in accordance with Claim 22, wherein the step for recovering while preserving such messages comprises the following:

an act of determining that the received message is a normal message suitable for normal mode operations;

an act of placing the message into a persistent queue for later processing; and

an act of completing recovery mode operation.